

Original Research Article**Histopathological Spectrum of Breast Lumps: A One Year Retrospective Study****Hawaladar Ranjana¹, Patidar Ekta², Sodani Sadhna³**

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Abstract

Introduction: In India, breast carcinoma is the second most common cause of death in women next only to cervical cancer and the incidence is as high as 20 per 1,00,000 women. The benign lesions are most common in the first few decades of life while incidence of malignant lesions peaks after menopause. The world wide incidence of breast cancer is estimated to be 1.38 million cases which is approximately 10.9% of the total malignancies detected every year.

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(Received on 28.05.2018,
Accepted on 09.06.2018)

Materials and Methods: The present retrospective study was undertaken to know the histopathological spectrum of the breast lumps received in the histopathology department of Sampurna Sodani Diagnostic Clinic, a stand alone diagnostic centre of Central Madhya Pradesh. A total of 91 breast specimens, including biopsy, lumpectomy and mastectomy specimens were included in the study.

Results: Out of these 91 cases, 80 cases (87.9%) were benign in nature and 11 cases (12.08%) were of malignant nature. Fibroadenoma was the most common benign neoplasm constituting 79.12% of all cases followed by chronic mastitis (4.39%), fibrocystic disease (2.1%) and benign phylloides tumor and lactating adenoma (1.09%) each. Of the malignant neoplasms, ductal carcinoma was the most common (8.79%) of all lesions followed by papillary carcinoma (2.1%) and one case of medullary carcinoma with an incidence of 1.09% of all malignancies.

Conclusion: Palpable and non - palpable lumps in breasts are common in females and require histopathological diagnosis for proper and timely management. Benign diseases of breasts are far more common than malignancies and fibroadenoma is the most common benign neoplasm.

Keywords: Breast Lump; Fibroadenoma; Ductal Carcinoma; Benign; Malignant.

Introduction

The human breast is composed of special epithelium and stromal tissue. Lumps are common finding in breast tissue and comprise of both benign and malignant lesions. It is one of the commonest cause of cancer related morbidity and mortality in females [1]. Benign

breast lumps may be of developmental origin or due to inflammatory causes or may be due to proliferation of the stromal or epithelial components and may be of malignant nature too [2]. While benign lumps constitute majority of the lesions found in the breast, some of the benign lesions are precursor to malignant change [3]. According to certain reports, the incidence of breast cancer in young patients is about 25% in Asia as

compared Western world.⁴ Histopathological examination of these breast lesions plays a pivotal role in diagnosis, treatment and prognosis of patients with these disorders [5].

In India, breast carcinoma is the second most common cause of death in women next only to cervical cancer and the incidence is as high as 20 per 1,00,000 women [6]. The benign lesions are most common in the first few decades of life while incidence of malignant lesions peaks after menopause [8]. The world wide incidence of breast cancer is estimated to be 1.38 million cases which is approximately 10.9% of the total malignancies detected every year [9].

Now-a-days, due to increasing awareness among the general population, along with campaigns carried out by healthcare professionals, the lumps are being detected at an early stage by radiological and cytological methods and treatment, either surgical or palliative, is initiated at an early stage, thereby increasing the chances of a positive outcome.

The present retrospective study was undertaken to know the histopathological spectrum of the breast lumps received in the histopathology department of Sampurna Sodani Diagnostic Clinic, a stand alone diagnostic centre of Central Madhya Pradesh.

Materials and Methods

This one year retrospective study was undertaken in the Department of Histopathology of Sampurna Sodani Diagnostic for a period of one year from January 2017 to December 2017 to study the frequency and histopathological spectrum of breast lesions. A total of 91 breast specimens, including biopsy, lumpectomy and mastectomy specimens were included in the study.

The tissue was fixed in 10% Formalin and after proper fixation, paraffin blocks were prepared from the tissue. 5 micron sections were made from these blocks and stained with H & E stain. The relevant clinical and surgical information was retrieved from the records.

A total of 91 cases of breast lumps in females were included in the study. The females were divided into 10-20, 21-30, 31-40, 41-50, 51-60, 61-70 years of age group. They were further divided into benign and malignant categories and also on the basis of site of the lesion.

Results

A total of 91 cases of breast lesions were included in the study. Out of these 91 cases, 80 cases (87.9%) were benign in nature and 11 cases (12.08%) were of malignant nature. Fibroadenoma was the most common benign neoplasm constituting 79.12% of all cases followed by chronic mastitis (4.39%), fibrocystic disease (2.1%) and benign phylloides tumor and lactating adenoma (1.09%) each. Of the malignant neoplasms, ductal carcinoma was the most common (8.79%) of all lesions followed by papillary carcinoma (2.1%) and one case of medullary carcinoma with an incidence of 1.09% of all malignancies.

Of the benign neoplasms, fibroadenoma was the most common (90%), followed by chronic mastitis (5%), fibrocystic disease (2.5%) and benign phylloides tumour and lactating adenoma (1.25%) each.

In the malignant category, ductal carcinoma was found in 72.72% cases, papillary carcinoma in 18.18% and medullary carcinoma in 9.09% cases (Table 1).

In 10-20 years age group, fibroadenoma was seen in 21 cases out of 22 cases (95.45%) and 1 case of lactating adenoma (4.54%).

In 21-30 years age group too, fibroadenoma was most common (94.8%) with one case of mastitis (2.56%) and one case of papillary carcinoma (2.56%).

As age increased the incidence of malignant lesions increased with 3 cases (50%) of ductal carcinoma in 41-50 years of age, 40% in 51-60 years of age and 66.66% in 61-70 years of age (Table 2).

According to site of involvement right breast was most commonly involved in 51 cases (56.04%), left breast

Table 1: Showing incidence of benign and malignant lumps

Sr. No.	Name of the Lesion	Total Cases		Overall Percentage
		In Numbers	In Percentage	
1	Fibroadenoma	72	90%	79.12%
2	Benign Phylloide Tumor	1	1.25%	1.09%
3	Fibrocystic Disease	2	2.5%	2.19%
4	Chronic Mastitis	4	5%	4.39%
5	Lactating Adenoma	1	1.25%	1.09%
6	Ductal Carcinoma	8	72.72%	8.79%
7	Papillary Carcinoma	2	18.18%	2.19%
8	Medullary Carcinoma	1	9.09%	1.09%

Table 2: Showing age wise incidence of benign and malignant lumps

Sr. No	Age (yrs)		Benign			Malignant		Total Cases
			Total Cases	Percentage		Total Cases	Percentage	
1	10 - 20	Fibroadenoma	21	95.45%		0	0	22
		Lactating Adenoma	1	4.54%				
2	21 - 30	Fibroadenoma	37	94.8%	Papillary Carcinoma	1	2.56%	39
		Chronic Mastitis	1	2.56%				
3	31 - 40	Fibroadenoma	10	62.5%	Ductal Carcinoma	1	6.25%	16
		Fibrocystic	2	12.5%				
		Chronic Mastitis	3	18.75%				
4	41 - 50	Fibroadenoma	3	50%	Ductal Carcinoma	3	50%	06
5	51 - 60	Fibroadenoma	1	20%	Ductal Carcinoma	2	40%	05
					Medullary Carcinoma	1	20%	
					Papillary Carcinoma	1	20%	
6	61 - 70	Phylloides Tumor	1	33.3%	Ductal Carcinoma	2	66.66%	03
			80	87.91%		11	12.08%	

Table 3: Showing incidence of breast lumps according to site of involvement

Sr. No.	Age (yrs)	Left	Right	Bilateral	Total Cases
1	10 - 20	9	13	0	22
2	21 - 30	14	23	2	39
3	31 - 40	7	9	0	16
4	41 - 50	3	3	0	6
5	51 - 60	2	3	0	5
6	61 - 70	3	0	0	3
		38 (41.75%)	51(56.04%)	2 (2.19%)	91

in 38 (41.75%) cases and both breasts were involved in 2 (2.19%) cases (Table 3).

Fibroadenoma was most frequently found in 2nd decade followed by 1st decade. Malignant tumors were most common beyond 4th decade of life.

Discussion

Breast lesions are a common cause of morbidity and mortality in females and also have cosmetic implications. The most common presenting symptoms of breast lesions are pain, lumpy feeling, nipple discharge and palpable lumps. Mastalgia is the most common presenting symptom and can be treated medically [10]. Benign breast lumps are most common as compared to malignancies and inflammations [11]. Several factors like nulliparity, age at first birth, menopausal age etc play an important role in the aetiology of these neoplasms [12,13].

Benign neoplasms are more common than the malignant neoplasms all over the world. In our study also, benign conditions were more common (87.9%) as compared to cancer (12.08%). Gogoi et al in their study

also reported 74.75% benign lesions and 25.25% malignancies [14]. Commonest malignancy was fibroadenoma and commonest malignancy was infiltrating duct cancer in their study which correlates with our study where fibroadenoma was commonest benign neoplasm (79.12%).

U.R. Singh et al. in their study had 80-70% benign lesions and 19.3% malignant lesions [15]. Rasheed et al., Malik et al. and Kulkarni et al. in their studies had similar observations with benign breast lesions outnumbering malignant lesions [16,17,18].

Similar observations were made by Abu Khalid et al in their study [19]. In their study, the maximum cases of breast lump were in 3rd and 4th decades while in our study we found maximum cases in 21-30 year of age group. The peak incidence of malignancy was observed 4th decades of life. In our study, the youngest case of malignancy was observed in 21-30 years of age which was diagnosed as papillary carcinoma.

Conclusion

Palpable and non - palpable lumps in breasts are common in females and require histopathological

diagnosis for proper and timely management. Benign diseases of breasts are far more common than malignancies and fibroadenoma is the most common benign neoplasm. Increasing awareness and screening programmes have been effective in detecting these lumps at an early stage thereby enhancing the quality of life. As more and more women are undergoing mammographic screening, the diagnosis of benign and malignant breast lesions is increasing. Histopathology is an important diagnostic tool and upon correlating it with clinical and radiological findings as well as with FNAC findings, occult malignancies are being detected at an earlier stage.

Conflict of Interest

None

References

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